ATLAS Safety Structures

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Comment [A1]: Enter No

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Comment [A4]: Enter No

Safety structures for both ATLAS premises including test beam areas

Prepared by:	Checked by:	Approved by:
G. Benincasa B. Di Girolamo	ATLAS GLIMOS	M. Nessi

Comment [A5]: Enter Name, Institute, E-mail

ATLAS Safety Structure

February 2004

ROLE	NAME/dep.	DEPUTY
Leader of Department hosting the collaboration	**W.D.Schlatter/PH**	
Technical Coordinator	**M.Nessi/PH**	
Installation Coordinator	**G. Tappern/PH**	
Departmental Safety Officer (DSO)	**P.Schilly/PH**	
Group Leader in Matter of Safety (GLIMOS)	**G.Benincasa/PH**	
Territorial Safety Officer (TSO) – **Bldg SX1/UX15**	**F.Butin/TS**	**B.Lebegue/TS**
Territorial Safety Officer (TSO) – **Bldg SDX1/USA15**	**C. Scalisi/PH**	**B.Lebegue/TS**
Safety Coordinator	**J.Etheridge/TS**	
Flamable Gas Safety Officer (FGSO)	**J.Godlewski/PH**	
Radiation Safety Officer (RSO)	**V.Hedberg/PH**	
Cryogenics Safety Officer (CSO)	**F.Haug/PH**	
Laser safety Officer (LSO)	**J. Pater/PH**	
Experimental Area Manager (EAM)	**F.Butin/TS**	
SC Safety Engineers for Contractors	**C.Pividori , R.Trant /SC**	
SC Radiastion Protection linkman	**M.Silari/SC**	
SC linkman for all other groups	**F. Szoncso/SC**	

SAFETY roles for ATLAS Test Beam areas

Leader of Department hosting the collaboration: **W. D. Schlatter/PH**

Holds overall responsibility for Safety in the geographical area under his authority
Appoints DSO, GLIMOS, TSO, FGSO, CSO, etc.

Technical Coordinator: **M. Nessi/PH**

Holds overall responsibility for project line management (including Safety)

Divisional Safety Officer (DSO): **P. Schilly/PH**

Appointed by PH Division Leader
Assists PH Division Leader in the performance of his Safety duties

GLIMOS: **G. Benincasa/PH**

Holds responsibility for Safety of experiment by delegation from EP Division Leader
Reports to EP Division Leader
Acts on Safety issues via Technical Coordinator of experiment
Assisted by Safety Coordinators

Territorial Safety Officer (TSO): **B. Chauchaix/AB**

Appointed by AB Department Leader

PH Flammable Gas Safety Officer (PH FGSO) **O. Ullaland/PH**

Appointed by PH Division Leader

ATLAS Flammable Gas Safety Officer (ATLAS FGSO) **J. Godlewski/PH**

Appointed by the ATLAS management

TIS Safety Engineer: **K. G. Lindell/SC-GS**

Reports to TIS-GS Group Leader/TIS Department Leader

ATLAS Test Beam Coordinator **B. Di Girolamo/PH**

Appointed by the ATLAS management
Responsible of all the common safety imfrastructure and of compliance of working conditions of the ATLAS control rooms to the CERN safety rules.

ATLAS Sub-detector Coordinators

Appointed by the Sub-detector management
Responsible of the working conditions compliance to CERN safety rules
List of the sub-detector coordinators:

ATLAS Pixel Test Beam Coordinators	*G. Gaglia*rdi/PH, M.Cobal/PH
ATLAS SCT Test Beam Coordinator	*G. Moorhead/PH*
ATLAS TRT Test Beam Coordinator	*A. Romaniouk/PH*
ATLAS LAr Test Beam Coordinator	*M. Aleksa/PH, I.Wingerter/PH*
ATLAS LAr EC Test Beam Coordinator	*P. Schacht/PH*
ATLAS Tilecal Test Beam Coordinator	*C. Santoni/PH*
ATLAS Muons Test Beam Coordinators	*F. Cerutti/PH, L. Pontecorvo/PH*
ATLAS GIF Test Beam Coordinators	*S. Palestini/PH, A. Di Ciaccio/PH* *S.Zimmerman/PH,V.* Polychronakos/PH

PH Responsible for Safety in GIF — ***M. Clayton/PH***
Appointed by PH Department Leader

ATLAS Responsible for Safety in GIF — ***B. Di Girolamo/PH***
Appointed by ATLAS GLIMOS

Rules for accessing the Test Beam areas

ATLAS test beam areas in building 887 (H6 and H8 lines), in building 190 (GIF/X5 facility/beam line) and in PS East Hall are classified as controlled areas. Any user accessing these building must wear the film badge as from the SC Safety Code F. All information for ATLAS users are collected at the link:
http://atlas.web.cern.ch/Atlas/GROUPS/GENERAL/TESTBEAM/Safety/

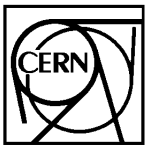
The access to the beam areas are regulated by the SPS/PS Experimental Beam Areas Rules (http://ab-div-op-sps.web.cern.ch/ab-div-op-sps/EA_Safety/eaSafetyMain.htm).
The zones can be in Free Access mode requiring only normal safety behaviour. After a search Patrol compliant to the safety rules, the access to the beam zone is turned into Key Access and later into Closed Area, that is the only condition that allows for putting up the beams in the areas.
The classification of the accesses are in detail:

Free access: any number of people can access the area, provided that the safety rules are respected.

Key access: Rule = One person one key, only 8 people at the time can enter in the area. In case of need of an higher number the zone has to be put in Free access

Closed Area. An area can be declared closed if all the keys are in place and authorization is granted by the SPS Control Room.

In case of a forced door or to go from Free access to Key access a patrol has to be performed. The patrol can only be done by people that has received the safety course by an AB-ATB-EA specialist or by the ATLAS responsibles that have already followed the course. People entitled to make a search patrol have to be registered to the PCR list an AB-ATB-EA specialist or by the ATLAS test beam coordinator.

		**Atlas Safety procedure for Installation and Commissioning**	
ATLAS Project Document. No. *Project - System -- Type - Sequential No.* ATC-GE-EY-0002	*EDMS id.:* 448834	*Created* 23-Februry 2004 *Modified*	*Page* 7 of 15 *Rev.* **1**

ATLAS SAFETY PROCEDURE FOR INSTALLATION AND COMMISSIONING

Abstract

Due to the increasing amount of activities, and therefore dangers, especially inside ATLAS caverns, the installation work has to be strictly regulated. This paper summarizes the procedures to be followed and the documents to be produced in order to obtain the work and access permits for ATLAS installation areas. The work packages system and the safety structure are also described.

Released as paper version after final discussion with SC in February 2004. This paper is available on WorldWideWeb: https://edms.cern.ch/document/448834/1 in 3 different languages (English, French and Russian).

Prepared by :		***Checked by :***		***Approved by :***
S.Fratianni and G. Benincasa		**G. Benincasa** **M. Nessi**		**Technical Coordinator** **M. Nessi**
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2 Work Organization

All installation/commissioning activities to be done at Point 1, whether they be for infrastructure or detector proper installation/commissioning, are integrated into the ATLAS general planning (EDMS id: ATL-TC-SS-0002) by the "ATLAS planning officer" once approved by the ATLAS Technical Coordination. Only works presented on the above mentioned planning are authorized in ATLAS premises at Point 1.

All work in the ATLAS experimental area will have to be documented and agreed upon in advance. Every activity has to be integrated into the general ATLAS planning in order to avoid dangerous overlapping. The general planning defines, then, the functional concept of "Work Package" (WP): that is an activity or group of similar activities (i.e.: installation of infrastructure, detector components, maintenance works, moving of big components etc…) to be done in a well defined time window. All the activities related to ATLAS installation and commissioning will be handled in the form of work packages. ATLAS has about 400 work packages foreseen. Some Work Packages will be subcontracted to industrial contractors, other will be executed by CERN and ATLAS personnel. In both cases the safety aspects and the necessary paper work and permits will be handled in the same way.

3.1 Work Packages procedures

Once the technical responsible of an activity (work package) gets the approval from the ATLAS technical coordination and the works, related to his/her activities, are integrated in the general planning there is a strict procedure to be followed before the work package is declared active and the works can begin. A work package is considered active if all the crucial technical and safety issues have been agreed during the Work Package Analysis Meeting, that usually takes place one month before the work starts (with reference to the general planning) and that is chaired by the ATLAS Experimental Area Manager (EAM). The independent check from the GTD/APAVE safety coordinator is then required.

The actions to be taken in order to activate a work package and to get the work permits are listed below in chronological order:

1- submission of a WP description file (EXCEL format)
2- submission of the WP PPSPS document (Doc format)
3- submission of an AOC document (EDH document)
4- submission of a fire permit request (if necessary, EDH document)
5- participation in the WP analysis meeting
6- joint safety inspection by the safety coordination (GPT/APAVE)

3.1.1 PPSPS (Special Safety and Health Protection Plan)

This document, drawn up by contractors and subcontractors, takes into account the spirit of French and EU legislation and Swiss trends with regard to health and safety co-ordination, and aims to harmonize the measures relating to health, safety and conditions in the workplace and thus limit risks and prevent occupational accidents and illnesses.

The PPSPS must be filled in by the WP leader (contractor or ATLAS personnel). It should pay particular attention to the description of all the special risks associated to the work to be performed and their counter measures. The following can be considered as "special risks":

- *Working at heights*
- *Using of lifting cabs (nacelles)*
- *Hot work (welding etc.)*
- *Working with flammable gases*
- *Working with chemicals and solvents*
- *Working near high voltage installations*
- *Transport and use of radioactive sources or materials*
- *Use of non-ionizing radiation, such as lasers*
- *Cryogenics work*
- *Working in confined spaces*

For all these special risks a dedicated safety code released by CERN Safety Commission (SC). It can easily be found in the SC section (under "CERN divisions") of EDMS (is normally available). A special risk not clearly identified at the taime of LEP is the "lowering of heavy weights. Some safety rules on this matter have been prepared by ATLAS community and accepted by the CERN Safety Commission (see Annex 2 in this document).

The PPSPS has to be completed and sent to the ATLAS EAM **at least 5 weeks** before the commencement of the works.

A guide for drawing up a PPSPS is available on the SC web in the "documents" section.

3.1.2 Work Package analysis meeting

The WP analysis meeting usually takes place **at least 4 weeks** before the start date; at this meeting the work package is presented by the WP responsible to the Experimental Area Management (EAM).

The procedures and dedicated form templates are available on EDMS in the EAM section of ATLAS structure (inside the folder "Organization matters" of the "ATLAS Technical Coordination" branch). Each WP description is associated to an EXCEL file to be submitted in advance to the EAM (see Annex 3 for an example)

Each WP description will contain:

- A short description of the work to be done.
- The list of material/equipment to be installed at Point 1 (see traceability).
- The list of people working at Point 1, including the WP responsible person, contact person on the site and deputy.
- A detailed schedule of operations, including deliveries and specific access conditions linked to them or the work to be performed.
- A safety assessment according to the documents (PPSPS, list of lifting apparatuses and their certifications and the crane driving permits in case the Contractor's / Collaboration team requires to use the cranes) with the detailed installation method and specific safety measures.
- Detailed request for transport and cranes operations, power, water, compressed air supply, telephone or network connections, waste, …
- Detailed request for storage space on the surface and underground
- Request for barracks (and any other specific need, i.e. network connections, telephone lines, etc. - and parking space).
- Lists of radioactive material (sources for calibration, etc) which need to be used in the underground at any time during the installation phase
- Necessary pre-existences (items of infrastructure or parts of other subdetectors) and sign-offs before starting the work package, including acceptances (partial or total) of these pre-existences

At a later stage, the WP file shall be completed with the minutes of the Joint safety inspection, the Start of Work notice, Fire Permits, etc.

3.1.3 AOC (Notice of start of works)

Work to be done by contractors on the CERN site must be announced by means of a Notice of Start of Work called AOC (Avis d'Ouverture de Chantier, available on SC web site – *safety procedures* section) issued by the work supervisor who has to be a member of the CERN personnel supervising the work.

The AOC form is an important part of the risk prevention plan. The AOC is sent to all CERN services and all persons concerned, both to obtain their comments and to inform them and draw their attention to the risks and any constraints associated with the worksite.

For installation/commissioning work purely executed by CERN/ATLAS personnel the AOC is not necessary.

3.1.4 Joint Safety Inspection

The joint safety inspection will take place **one week before** the start of the work. During this inspection the safety coordinator (GTD/APAVE), the Work Package responsible, the contractor and subcontractors and the Experimental Area Management verify that all safety procedures, measures and rules have really been considered. The safety coordinator can eventually give additional recommendations on safety. Once the safety inspection is positively concluded the works may officially begin.

4.3 Traceability

The person in charge of the WP shall provide, well in advance of the delivery of material to be installed in the underground, the necessary information (in a convenient electronic as well as paper format) to the ATLAS installation database.

The data base will store the main properties together with the location of the equipment and the type and location of the interconnections in the experiment. The database will be used to :

- Fulfill the requirements of INB (Tracking of equipment)
- Manage the position of the equipment in the underground area
- Support maintenance operations

A description of ATLAS installation database can be found on EDMS (id.: 345996).

ATLAS AOS
Agreement On safety

Assembly of ATLAS parts where no external contractors are involved.

Prepared by :	*Checked by :*	*Approved by :*
G. Benincasa…..	**G. Benincasa**	**Technical Coordinator**

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AOS N. *11*

TIS -ATLAS
AGREEMENT ON SAFETY

1) SYSTEM-SUBSYSTEM-EQUIPMENT CONCERNED

-PBS name ATLAS……..

-Description…Assembly of ATLAS parts where no external

Contractors are involved.…

-Ref. Documents……..

2) SAFETY ASPECTS CONSIDERED

-Short description…The Assembly Leader, staff or member of the Collaboration, is considered in all respects as a Contractor…….

- Ref. Documents…See Attached Memorandum……

3) TIS POSITION

☐ x **Agreed(with or without comments)**

☐ **Agreed with restrictions(comments)**

☐ **Rejected(comments mandatory)**

Comments:……..

4) SIGNATURES

Date:…20/10/2002….

TIS	ATLAS	ATLAS
Representative person	**the Glimos**	**The Technical Coordinator**
W. Weingarten	**G. Benincasa**	**M. Nessi**

ANNEX

TIS-GS/WW-cn (2002-23) 15th October, 2002

M E M O R A N D U M

To : G. Benincasa, M.Nessi / EP
cc : P. Schilly, D. Schlatter / EP, J.-C. Carlier, C. Pividori, H. Schönbacher, M. Vadon / TIS
From : W. Weingarten / TIS
Subject : Assembly of ATLAS parts where no external contractors are involved.

This is to propose to EP a definition of responsibilities with regard to safety for the assembly of ATLAS parts in those cases where the assembly is performed and managed by Members of the Collaboration (users or staff). A typical example is the assembly of the Tile Calorimeter in Building 185.

The work shall be performed under the responsibility of an **Assembly Leader**. He is subject to the status of "member of experiment Collaborations", as defined in SAPOCO/42, chapter 5, and as such he must comply with the Safety regulations in force at CERN. He is attached to EP as Host Division, and reports in matters of Safety - the direct line of responsibility - to the GLIMOS of ATLAS.

The **GLIMOS** himself is appointed by the Leader of the Host Division and reports to him. The GLIMOS' task is to ensure - as laid down in SAPOCO/42 - the safety measures deemed imperative.

The Assembly Leader is responsible – like any other member of personnel - to the **Technical Coordinator** as his supervisor for the operative work with Safety being an integral part of it. He must put into operation all safety requirements deemed imperative at all stages of the project.

In view of the complexity and organisation of the work foreseen, TIS recommends in this particular case applying the safety regulations as laid down for category 2 work in TIS-GS/98-10, "Safety regulations applicable to the work of contractors at CERN".

According to this document, appendix 2, a **safety co-ordinator** shall be appointed. The Assembly Leader may take up this function as well.

The Assembly Leader shall issue a notice of start of works AOC and inform the workers on the specific risks of the workplace before the start of the work.

The safety coordinator is in charge of the establishment of the risk prevention plan and of the joint inspection of the work places to be organized before the start of the work. He shall assure that all necessary safety measures are put and kept in place during the execution of the work.

Budget lines shall be made available via the DSO of the Host Division to the TSO (concerning safety of the building and its installations) and via the Technical Coordinator of the collaboration to the Assembly Leader (concerning safety of the work).